COSMOS.*

THE STUDY OF NATURE IN ITS RIGHT ORDER AND CONCURRENCE OF FORMS AND POWERS.

THERE may be much more in heaven and earth than is dreamt of even in Baron Von Humboldt's philosophy, and, nevertheless, that same philosophy be perfectly correct; for, compendious as is his detail of what does exist in both of these rather extensive districts, his philosophy relates not so much to what 'may be' in either, as to its proper order or arrangement when it does 'turn up.' "A proper place for every thing, and every thing in its proper place," might very fairly be adopted by the baron as his motto, were it not rather too homely for a cosmopolite so far-travelled, so far-seeing, and so renowned.

The sweep of this philosopher's mental vision is indeed a noble one,—his aim an all comprehensive one. We prefer, however, at once to occupy our space with his own plain, modest, prefatorial explanation of his own great purpose, much rather than presume to translate his ideology into any other.

"The first volume contains a general view of nature, from the remotest nebulæ and revolving double stars to the terrestrial phenomena of the geographical distribution of plants, of animals, and of races of men; preceded by some preliminary considerations on the different degrees of enjoyment offered by the study of nature and the knowledge of her laws; and on the limits and method of a scientific exposition of the physical description of the Universe. I regard this as the most important and essential portion of my undertaking, as manifesting the intimate connection of the general with the special, and as exemplifying, in form and style of composition, and in the selection of the results taken from the mass of our experimental knowledge, the spirit of the method in which I have proposed to myself to conduct the whole work. In the two succeeding volumes I design to consider some of the particular incitements to the study of Nature,—to treat of the history of the contemplation of the physical universe, or the gradual development of the idea of the concurrent action of natural forces co-operating in all that presents itself to our observation,—and lastly, to notice the specialties of the several branches of science, of which the mutual connection is indicated in the general view of nature in the present volume."

We might as well attempt to give our readers an idea of the British Museum by the exhibition of one or two of its lions or its eagles, or a 'specimen' or two of its gold or silver ores, as any correct idea of "Cosmos" from mere quotations within our limits: we must refer them to the work itself, which is now within the reach of all, at half-a-crown a-volume,—a phenomenon, the mere sight of which itself is 'well worth the money,' as an exhibitor might say of some one introductory wonder of the nineteenth century, issuing in a host of other varieties and valuables.

But we may fairly present an illustration of the author's general style, though even that is varied, ranging from what befits the calm philosopher, to even the picturesque and glowing imagery of the artistical enthusiast. As an average specimen of the whole, however, we may quote a few of his preliminary observations on the general study of natural knowledge:—

"The clearer our insight into the connection of phenomena, the more easily shall we emancipate ourselves from the error of those who do not perceive that for the intellectual cultivation and for the prosperity of nations, all branches of natural knowledge are alike important; whether the measuring and describing portion, or the examination of chemical constituents, or the investigation of the physical forces by which all matter is pervaded. It has not been uncommon presumptuously to depreciate investigations arbitrarily characterised as 'purely theoretic,' forgetting that in the observation of a phenomenon which shall at first sight appear isolated, may lie concealed the germ of a great discovery. * * * * Where all the blossoms of civilisation unfold themselves with vigour under the shelter of wise laws and free institutions, there is no danger of the development of the human mind in any one direction proving prejudicial to it in others. Each offers to the nation precious fruits,—those which furnish necessary subsistence and comfort, and are the foundation of material wealth,—and those fruits of creative fancy which, far more enduring than that wealth, transmit the glory of the nation to the remotest posterity. The Spartans, in spite of the Doric severity of their mode of thought, 'prayed the Gods to grant them the beautiful with the good.' As in that higher sphere of thought and feeling to which I have just alluded, in philosophy, poetry, and the fine arts, the primary aid of every study ought to be an inward one, that of enlarging and fertilising the intellect; so the direct aim of science should ever be the discovery of laws, and of the principles of unity, order, and connection, which every where reveal themselves in the universal life of nature. But by that happy connection, whereby the useful is ever linked with the true, the exalted, and the beautiful, science thus followed for her own sake will pour forth abundant, overflowing streams, to enrich and fertilise that industrial prosperity which is a conquest of the intelligence of man over matter."

Without desiring to institute any parallel, or to express any opinion as to relative or respective merits, we cannot conclude without reference to Mrs. Sommerville's most able work on the connection of the physical sciences, in especial juxta-position with the context of such a quotation as this. In the only special notice of Mrs. Sommerville's work which we have remarked either in text or index, the baron himself does this lady the justice to allude to her "generally so exact and excellent treatise." With the translator, or rather the editor, we have at present only one fault to find, if fault it be: why still persist in giving the new centrifugal planet 'Neptune,' as he does so prominently in *the only note*, throughout, beneath the text (Vol. I., p. 20), the controversial, and by no means co-relative name of 'Le Verrier!' even granting that it be not amiss to give the credit of the 'a-missing' planet's discovery to him and not to Adams. Is it because the colonel happens to be the *foreign* sec. of the R. S. that it is so? By the fiat of astronomers in general, Le Verrier himself included, if we mistake not, the planet in question has been already formally christened with the certainly heathen, but still co-relative, name of 'Neptune,' a much better associate for Jupiter, Saturn, and Uranus than 'Le Verrier' can ever be, at least until the nineteenth century be lost in the myths of ages, and then the already classical name of Sabine itself may, we hope, hold an honourable place, if not in the rank of Jupiter and Le Verrier, at least among the lesser stars.

* "Sketch of a Physical Description of the Universe, by Alexander Von Humboldt. Translated under the superintendence of Lieut.-col. Edward Sabine, R.A., For. Sec. R.S. Fourth edition. London: Printed for Longman, Brown, Green, and Longmans, Paternoster-row; and John Murray, Albemarle-street, 1849:"—in two volumes.

METROPOLITAN COMMISSION OF SEWERS.

Protest against the appointment of Committees.—At a general court held on the 22nd, to which we briefly referred in our last, the Earl of Carlisle in the chair, the minutes of the last court having been read, including which were fourteen resolutions for the appointment of committees,—

The Hon. F. Byng said he rose for the purpose of protesting against the passing of these orders. When he left the last court he had little intention of returning to it, but for the astounding orders, cut and dried, that had been thrown upon the court by Mr. Bullar, apparently with the authority of law, and which were seconded by Mr. Stone; who then acknowledged that he had never seen them before. He (Mr. Byng) believed them to be nothing more than an evasion of the opinion of the law officers of the crown. Having considered the subject further, and taken good advice, he had come down for the purpose of protesting against these proceedings, and he should do so in spite of the charge of "obstruction" to the business of the court. Luckily, however, he was one of the small number by whose "obstruction" they had gained for the public open doors and a knowledge of all their proceedings. The regulation of their business had been submitted to two gentlemen, of whose ability there could be no doubt—Mr. Bullar and Mr. Chadwick, and they had submitted various suggestions. The mode of its transaction had lately become most serious and ought to be checked. He might allude to the Committee on the Ordnance Survey, from whom they had received no minutes, or any account as to what expense the commission would be put to—in fact, they had received no account whatever, except a frequent charge for wages. He then adverted to the charge for flushing, which, without curing the disease of filth and dirt, had up to December cost 14,000*l.* After some farther observations, the hon. Commissioner recorded a lengthened protest against the orders, which, after detailing the grounds of objection to individual orders, concludes with a general protest against the whole:—

"Because out of the seven committees constituted or confirmed by these orders, four exclusively consist (with one single exception) of twelve of the commissioners nominated upon the Works Committee; and because the system of permanent private committees, as sanctioned by these orders, will destroy the responsibility of the officers, impair the efficiency of the court, and deprive the public of their main security against extravagance and caprice."

Mr. Leslie said he had seen the document, and had great pleasure in signing the protest, as it put fairly before the court the true construction of the Act of Parliament. At the last court he wished these orders to stand as notices of motion; but that being refused, he had no course left but to sign the protest.—Mr. Lawes also expressed his determination of signing it; and contended that referring matters in gross to committees was opposed to all principles of law.

The Earl of Carlisle said there could be no objection to any commissioner protesting against their proceedings; but as the question had been decided by so large a majority at the last court, he thought it was not desirable to reverse that decision without notice.—Lord Ebrington said no idea of secrecy existed, but only a discretion as to limiting the number, to prevent interruption to public busines.

Mr. Chadwick said on the question of publicity, so much talked of, he believed there could be no greater evil or obstruction than being called upon to pass a mass of unexamined and unarranged business in open court. He believed that it would be impossible to get through it unless by a subdivision of labour. Take, for instance, the Committee on the Ordnance survey, that had been spoken of. Now, nothing could be more ignorantly absurd than to suppose that the business of a triangular survey could be done in open court. He then took a review of that work, and said that the public were deeply indebted to the indefatigable zeal of Sir Henry de la Beche, who had given a clearness and accuracy to the works of the survey that were beyond all praise. In point of money, he had saved the public 100,000*l.*; and in point of time, several years. The county had had the best talent engaged on it; and when completed would be the greatest and most accurate work ever accomplished. He justified, next, the charge for flushing, as the only expedient that lay within their reach; and although it had cost 14,000*l.*, under the former system of carting it would have cost five or six times that amount.

Mr. Bullar denied any intention of evading the Act of Parliament.

The Ordnance Survey.—Three very voluminous reports were received on the subject of the survey, in which a variety of topics were treated on. It appeared that the whole of the ground survey is complete except in some parts of Kent and Surrey, which would be complete in three or four months, and the whole of the town area would be completed by the end of the year. These documents were accompanied by reports on the subterranean survey, showing that the sewers in Soho, Fitzroy, Manchester, Cavendish, and Bryanstone squares were loaded with filthy deposit, and also those in Hyde-park-gardens and the costly streets and squares adjacent, with Berkeley and Eaton squares. In fact, the only healthy spot in the whole city of Westminster was in the neighbourhood of the Seven Dials. As regarded the sewers of Kent and Surrey, they contained deposit varying from 5 feet in depth, and several explosions of choke damp had taken place during the examination of them.

A long discussion ensued on the drainage of Kensington, and the surveyors were ordered to report on the best means of effecting this.

A proposition to employ street orderlies in conjunction with this commission in street cleansing was negatived.

It was ordered that Hammersmith and Fulham be declared a sewers district.

An application from Guildford, asking that Mr. Phillips may assist in the inspection of plans for the drainage of that town, was respectfully declined by the court.*

Various lengths of pipe sewer were ordered to be put down.

THE DUNDEE ROYAL ARCH COMPETITION.—Out of 300 designs submitted to them, the committee, described to us as being wholly incapable of judging, have selected a *Norman* design, by Mr. J. T. Roughead, of Glasgow. We are informed by a professional correspondent that it consists of a *pointed* centre arch, two semicircular side ones, three tiers, one above another, of interlacing Norman arches, two octagonal turrets with battlements terminating the main piers. The selection has caused great dissatisfaction.

* This will serve as a reply to several inquirers on the subject of this competition.—ED.

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